

1600

1653



ENTERED <sup>P# 16</sup> OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/613,508A

DATE: 11/29/2002

TIME: 16:08:02

RECEIVED

Input Set : A:\Seq Listing.ST25.txt

Output Set: N:\CRF4\11292002\I613508A.raw

DEC 18 2002

TECH CENTER 1600/2900

3 <110> APPLICANT: He, Wei-Wu  
 4 Hudson, Peter  
 5 Hastings, Gregg  
 6 Rosen, Craig  
 8 <120> TITLE OF INVENTION: Interleukin-1 Beta Converting Enzyme Like Apoptosis Protease  
 3 and 4  
 10 <130> FILE REFERENCE: PF140P1D1  
 12 <140> CURRENT APPLICATION NUMBER: 09/613,508A  
 C--> 13 <141> CURRENT FILING DATE: 2002-11-13  
 15 <150> PRIOR APPLICATION NUMBER: US 08/462,969  
 16 <151> PRIOR FILING DATE: 1995-06-05  
 18 <150> PRIOR APPLICATION NUMBER: US 08/334,251  
 19 <151> PRIOR FILING DATE: 1994-11-01  
 21 <160> NUMBER OF SEQ ID NOS: 14  
 23 <170> SOFTWARE: PatentIn version 3.1  
 25 <210> SEQ ID NO: 1  
 26 <211> LENGTH: 1371  
 27 <212> TYPE: DNA  
 28 <213> ORGANISM: Homo sapiens  
 30 <400> SEQUENCE: 1  
 31 gcacgagaaa ctttgctgtg cgcgttctcc cgcgcgcggg ctcaactttg tagagcgagg 60  
 33 ggccaacttg gcagagcgcg cggccagctt tgcagagagc gccctccagg gactatgcgt 120  
 35 gcggggacac gggctcgctt gggctcttcc acccctgcgg agcgcactac cccgagccag 180  
 37 gggcggtgca agccccgccc ggccctaccc agggcggtc ctccctccgc agcgccgaga 240  
 39 cttttagttt cgctttcgct aaaggggccc cagacccttg ctgcgagcg acggagagag 300  
 41 actgtgccag tcccagccgc cctaccgccc tgggaacgat ggcagatgat tcagggctgt 360  
 43 attgaagagc aggggggtga ggattcagca aatgaagatt cagtggatgc taagccagac 420  
 45 cggtcctcgt ttgtaccgtc cctcttcagt aagaagaaga aaaatgtcac catgcgatcc 480  
 47 atcaagacca cccgggaccg agtgcctaca tatcagtaca acatgaattt tgaaaagctg 540  
 49 ggcaaatgca tcataataaa caacaagaac tttgataaag tgacaggtat gggcgttcga 600  
 51 aacggaacag acaaagatgc cgaggcgctc ttcaagtgtc tccgaagcct gggttttgac 660  
 53 gtgattgtct ataagtactg ctcttggtgcc aagatgcaag atctgcttaa aaaagcttct 720  
 55 gaagaggacc atacaaatgc cgctgtcttc gcctgcatcc tcttaagcca tggagaagaa 780  
 57 aatgtaattt atgggaaaga tgggtgcaca ccaataaact atttgacagc ccactttagg 840  
 59 ggggatagat gcaaaaccct tttagagaaa cccaaactct tcttcattca ggcttgccga 900  
 61 gggaccgagc ttgatgatgg catccaggcc gactcggggc ccatcaatga cacagatgct 960  
 63 aatcctcgat acaagatccc agtggaagct gacttcctct tcgcctattc cacggttcca 1020  
 65 ggctattact cgtggaggag cccaggaaga ggctcctggt ttgtgcaagc cctctgctcc 1080  
 67 atcctggagg agcacggaaa agacctggaa atcatgcaaa tctccacca gggatgaatga 1140  
 69 cagagttgcc aggcactttg agtctcagtc tgatgaccca cacttccatg agaagaagca 1200  
 71 gatccccctgt gtggctctcca tgctcaccaa ggaactctac ttcagtcaat agccatatca 1260  
 73 ggggtacatt cttagctgaga agcaatgggt cactcattaa tgaatcacat ttttttatgc 1320  
 75 tcttgaaata ttcagaaatt ctccaggatt ttaatttcag gaaaatgtat t 1371  
 78 <210> SEQ ID NO: 2

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79 &lt;211&gt; LENGTH: 303

80 &lt;212&gt; TYPE: PRT

81 &lt;213&gt; ORGANISM: Homo sapiens

83 &lt;400&gt; SEQUENCE: 2

```

85 Met Ala Asp Asp Gln Gly Cys Ile Glu Glu Gln Gly Val Glu Asp Ser
86 1          5          10          15
89 Ala Asn Glu Asp Ser Val Asp Ala Lys Pro Asp Arg Ser Ser Phe Val
90          20          25          30
93 Pro Ser Leu Phe Ser Lys Lys Lys Lys Asn Val Thr Met Arg Ser Ile
94          35          40          45
97 Lys Thr Thr Arg Asp Arg Val Pro Thr Tyr Gln Tyr Asn Met Asn Phe
98          50          55          60
101 Glu Lys Leu Gly Lys Cys Ile Ile Ile Asn Asn Lys Asn Phe Asp Lys
102 65          70          75          80
105 Val Thr Gly Met Gly Val Arg Asn Gly Thr Asp Lys Asp Ala Glu Ala
106          85          90          95
109 Leu Phe Lys Cys Phe Arg Ser Leu Gly Phe Asp Val Ile Val Tyr Asn
110          100          105          110
113 Asp Cys Ser Cys Ala Lys Met Gln Asp Leu Leu Lys Lys Ala Ser Glu
114          115          120          125
117 Glu Asp His Thr Asn Ala Ala Cys Phe Ala Cys Ile Leu Leu Ser His
118          130          135          140
121 Gly Glu Glu Asn Val Ile Tyr Gly Lys Asp Gly Val Thr Pro Ile Lys
122 145          150          155          160
125 Asp Leu Thr Ala His Phe Arg Gly Asp Arg Cys Lys Thr Leu Leu Glu
126          165          170          175
129 Lys Pro Lys Leu Phe Phe Ile Gln Ala Cys Arg Gly Thr Glu Leu Asp
130          180          185          190
133 Asp Ala Ile Gln Ala Asp Ser Gly Pro Ile Asn Asp Thr Asp Ala Asn
134          195          200          205
137 Pro Arg Tyr Lys Ile Pro Val Glu Ala Asp Phe Leu Phe Ala Tyr Ser
138          210          215          220
141 Thr Val Pro Gly Tyr Tyr Ser Trp Arg Ser Pro Gly Arg Gly Ser Trp
142 225          230          235          240
145 Phe Val Gln Ala Leu Cys Ser Ile Leu Glu Glu His Gly Lys Glu Leu
146          245          250          255
149 Glu Ile Met Gln Ile Leu Thr Arg Val Asn Asp Arg Val Ala Arg His
150          260          265          270
153 Phe Glu Ser Gln Ser Asp Asp Pro His Phe His Glu Lys Lys Gln Ile
154          275          280          285
157 Pro Cys Val Val Ser Met Leu Thr Lys Glu Leu Tyr Phe Ser Gln
158          290          295          300

```

161 &lt;210&gt; SEQ ID NO: 3

162 &lt;211&gt; LENGTH: 1159

163 &lt;212&gt; TYPE: DNA

164 &lt;213&gt; ORGANISM: Homo sapiens

166 &lt;400&gt; SEQUENCE: 3

```

167 gcacgagcgg atgggtgcta ttgtgaggcg gttgtagaag agtttcgtga gtgctcgag      60
169 ctcatacctg tggctgtgta tccgtggcca cagctggttg gcgtcgcctt gaaatcccag      120

```

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171 gccgtgagga gttagcgagc cctgctcaca ctcggcgctc tggttttcgg tgggtgtgcc 180
173 ctgcacctgc ctcttcccgc attctcatta ataaagggtat ccatggagaa cactgaaaac 240
175 tcagtggatt caaaatccat taaaaatttg gaaccaaaga tcatacatgg aagcgaatca 300
177 atggactctg gaatatccct ggacaacagt tataaaatgg attatcctga gatgggttta 360
179 tgtataataa ttaataataa gaattttcat aaaagcactg gaatgacatc tcggtctggt 420
181 acagatgtcg atgcagcaaa cctcagggaa acattcagaa acttgaaata tgaagtcagg 480
183 aataaaaaatg atcttacacg tgaagaaatt gtggaattga tgcgtgatgt ttctaaagaa 540
185 gatcacagca aaaggagcag ttttgtttgt gtgcttctga gccatggtga agaaggaata 600
187 atttttggaa caaatggacc tgttgacctg aaaaaaataa caaacttttt cagaggggat 660
189 cgttgtagaa gtctaactgg aaaacccaaa cttttcatta ttcaggcctg ccgtggtaca 720
191 gaactggact gtggcattga gacagacagt ggtgttgatg atgacatggc gtgtcataaa 780
193 ataccagtgg agggcgactt cttgtatgca tactccacag cacctgggta ttattcttgg 840
195 cgaaattcaa aggatggctc ctggttcac cagtcgcttt gtgccatgct gaaacagtat 900
197 gccgacaagc ttgaatttat gcacattctt acccgggtta accgaaaggt ggcaacagaa 960
199 tttgagtcct ttctctttga cgctactttt catgcaaaga aacagattcc atgtattgtt 1020
201 tccatgctca caaaagaact ctatttttat cactaaagaa atggttggtt ggtggttttt 1080
203 tttagtttgt atgccaagtg agaagatggt atatttggtt actgtatttc cctctcattg 1140
205 gggacctact ctcatgctg 1159

```

208 &lt;210&gt; SEQ ID NO: 4

209 &lt;211&gt; LENGTH: 277

210 &lt;212&gt; TYPE: PRT

211 &lt;213&gt; ORGANISM: Homo sapiens

213 &lt;400&gt; SEQUENCE: 4

```

215 Met Glu Asn Thr Glu Asn Ser Val Asp Ser Lys Ser Ile Lys Asn Leu
216 1 5 10 15
219 Glu Pro Lys Ile Ile His Gly Ser Glu Ser Met Asp Ser Gly Ile Ser
220 20 25 30
223 Leu Asp Asn Ser Tyr Lys Met Asp Tyr Pro Glu Met Gly Leu Cys Ile
224 35 40 45
227 Ile Ile Asn Asn Lys Asn Phe His Lys Ser Thr Gly Met Thr Ser Arg
228 50 55 60
231 Ser Gly Thr Asp Val Asp Ala Ala Asn Leu Arg Glu Thr Phe Arg Asn
232 65 70 75 80
235 Leu Lys Tyr Glu Val Arg Asn Lys Asn Asp Leu Thr Arg Glu Glu Ile
236 85 90 95
239 Val Glu Leu Met Arg Asp Val Ser Lys Glu Asp His Ser Lys Arg Ser
240 100 105 110
243 Ser Phe Val Cys Val Leu Leu Ser His Gly Glu Glu Gly Ile Ile Phe
244 115 120 125
247 Gly Thr Asn Gly Pro Val Asp Leu Lys Lys Ile Thr Asn Phe Phe Arg
248 130 135 140
251 Gly Asp Arg Cys Arg Ser Leu Thr Gly Lys Pro Lys Leu Phe Ile Ile
252 145 150 155 160
255 Gln Ala Cys Arg Gly Thr Glu Leu Asp Cys Gly Ile Glu Thr Asp Ser
256 165 170 175
259 Gly Val Asp Asp Asp Met Ala Cys His Lys Ile Pro Val Glu Ala Asp
260 180 185 190
263 Phe Leu Tyr Ala Tyr Ser Thr Ala Pro Gly Tyr Tyr Ser Trp Arg Asn
264 195 200 205

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Input Set : A:\Seq Listing.ST25.txt

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```

267 Ser Lys Asp Gly Ser Trp Phe Ile Gln Ser Leu Cys Ala Met Leu Lys
268      210                      215                      220
271 Gln Tyr Ala Asp Lys Leu Glu Phe Met His Ile Leu Thr Arg Val Asn
272 225                      230                      235                      240
275 Arg Lys Val Ala Thr Glu Phe Glu Ser Phe Ser Phe Asp Ala Thr Phe
276                      245                      250                      255
279 His Ala Lys Lys Gln Ile Pro Cys Ile Val Ser Met Leu Thr Lys Glu
280                      260                      265                      270
283 Leu Tyr Phe Tyr His
284      275
287 <210> SEQ ID NO: 5
288 <211> LENGTH: 31
289 <212> TYPE: DNA
290 <213> ORGANISM: Artificial
292 <220> FEATURE:
293 <223> OTHER INFORMATION: Contains a Bam HI restriction enzyme site (underlined)
followed b
294      y 18 nucleotides of ICE-LAP-3 coding sequence starting from the p
295      resumed terminal amino acid of the processed protein codon
297 <400> SEQUENCE: 5
298 gatcggatcc atgcgtgcgg ggacacgggt c                               31
301 <210> SEQ ID NO: 6
302 <211> LENGTH: 31
303 <212> TYPE: DNA
304 <213> ORGANISM: Artificial
306 <220> FEATURE:
307 <223> OTHER INFORMATION: Contains complementary sequences to an Xba I site followed
by 21
308      nucleotides of ICE-LAP-3
310 <400> SEQUENCE: 6
311 gtactctaga tcattcaccc tgggtggagga t                               31
314 <210> SEQ ID NO: 7
315 <211> LENGTH: 31
316 <212> TYPE: DNA
317 <213> ORGANISM: Artificial
319 <220> FEATURE:
320 <223> OTHER INFORMATION: Contains a Bam HI restriction enzyme site followed by 18
nucleoti
321      des of ICE-LAP-4 coding sequence starting from the presumed termi
322      nal amino acid of the processed protein codon
324 <400> SEQUENCE: 7
325 gatcggatcc atggagaaca ctgaaaactc a                               31
328 <210> SEQ ID NO: 8
329 <211> LENGTH: 31
330 <212> TYPE: DNA
331 <213> ORGANISM: Artificial
333 <220> FEATURE:
334 <223> OTHER INFORMATION: Contains complementary sequences to an Xba I site followed
by 21
335      nucleotides of ICE-LAP-4
337 <400> SEQUENCE: 8
338 gtactctaga ttagtgataa aaatagagtt c                               31
341 <210> SEQ ID NO: 9

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## RAW SEQUENCE LISTING

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TIME: 16:08:02

Input Set : A:\Seq Listing.ST25.txt

Output Set: N:\CRF4\11292002\I613508A.raw

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342 <211> LENGTH: 22
343 <212> TYPE: DNA
344 <213> ORGANISM: Artificial
346 <220> FEATURE:
347 <223> OTHER INFORMATION: Contains the ICE-LAP-3 translational initiation site ATG
followed
348     by 5 nucleotides of ICE-LAP-3 coding sequence starting from the
349     initiation codon
351 <400> SEQUENCE: 9
352 gactatgcgt gcggggacac gg                                22
355 <210> SEQ ID NO: 10
356 <211> LENGTH: 53
357 <212> TYPE: DNA
358 <213> ORGANISM: Artificial
360 <220> FEATURE:
361 <223> OTHER INFORMATION: Contains translation stop codon, HA tag and the last 21
nucleotid
362     es of the ICE-LAP-3 coding sequence, not including the stop codon
364 <400> SEQUENCE: 10
365 aatcaagcgt agtctgggac gtcgtatggg tattcacct ggtggaggat ttg            53
368 <210> SEQ ID NO: 11
369 <211> LENGTH: 21
370 <212> TYPE: DNA
371 <213> ORGANISM: Artificial
373 <220> FEATURE:
374 <223> OTHER INFORMATION: Contains the ICE-LAP-4 translational initiation site, ATG,
follow
375     ed by 15 nucleotides of ICE-LAP-4 coding sequence starting from t
376     he initiation codon
378 <400> SEQUENCE: 11
379 accatggaga aactgaaaa c                                21
382 <210> SEQ ID NO: 12
383 <211> LENGTH: 53
384 <212> TYPE: DNA
385 <213> ORGANISM: Artificial
387 <220> FEATURE:
388 <223> OTHER INFORMATION: Contains translation stop codon, HA tag and the last 21
nucleotid
389     es of the ICE-LAP-4 coding sequence, not including the stop codon
391 <400> SEQUENCE: 12
392 aatcaagcgt agtctgggac gtcgtatggg tagtgataaa aatagagttc ttt            53
395 <210> SEQ ID NO: 13
396 <211> LENGTH: 503
397 <212> TYPE: PRT
398 <213> ORGANISM: Caenorhabditis elegans
400 <400> SEQUENCE: 13
402 Met Met Arg Gln Asp Arg Arg Ser Leu Leu Glu Arg Asn Ile Met Met
403 1          5          10          15
406 Phe Ser Ser His Leu Lys Val Asp Glu Ile Leu Glu Val Leu Ile Ala
407          20          25          30
410 Lys Gln Val Leu Asn Ser Asp Asn Gly Asp Met Ile Asn Ser Cys Gly
411          35          40          45
414 Thr Val Arg Glu Lys Arg Arg Glu Ile Val Lys Ala Val Gln Arg Arg

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RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 11/29/2002  
PATENT APPLICATION: US/09/613,508A      TIME: 16:08:03

Input Set : A:\Seq Listing.ST25.txt  
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Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:5,6,7,8,9,10,11,12

**VERIFICATION SUMMARY**

DATE: 11/29/2002

PATENT APPLICATION: US/09/613,508A

TIME: 16:08:03

Input Set : A:\Seq Listing.ST25.txt

Output Set: N:\CRF4\11292002\I613508A.raw

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date